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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,373	05/19/2005	Hidetaka Oka	EL/2-22798/A/CGJ 130/PCT	9344
324 7590 06/25/2010 BASF Performance Products LLC Patent Department 540 White Plains Road P.O. Box 2005 Tarrytown, NY 10591				
EXAMINER JOHNSON, CONNIE P				
ART UNIT		PAPER NUMBER		
1795				
NOTIFICATION DATE		DELIVERY MODE		
06/25/2010		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/535,373

Applicant(s)

OKA ET AL.

Examiner

CONNIE P. JOHNSON

Art Unit

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6 and 11-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 6, 11 and 13 is/are rejected.
- 7) ☒ Claim(s) 3 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. The remarks filed 4/2/2010 have been entered and fully considered.
2. Claims 1-3, 6 and 11-13 are presented.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 6, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tronche et al., U.S. Patent Publication No. 2002/0025402 A1 in view of Yashiro et al., U.S. Patent No. 7,144,677 B2.

Tronche teaches a radiation curable composition for optical discs comprising a photoinitiator (page 5, [0047]), a polymerizable monomer (page 5, [0052]), an epoxy acrylate to increase curing speed (page 4, [0043]) and an alkali-soluble polymer (page 5, [0045]). Tronch teaches vinyl ethers and vinyl esters as the polymerizable monomer (instant claim 13) (page 5, [0052]). Although Tronch teaches a phthalocyanine dye in the composition, Tronch does not teach the specific structure of a copper phthalocyanine dye with the specific alkoxy groups as the substituents as claimed.

Additionally, Yashiro teaches a recording layer comprising a copper phthalocyanine dye with the substituent $(-O-C(R^1)(R^3)-R^2)$ wherein R^1 and R^3 are hydrogen atoms and R^2 is a phenyl group (col. 7, lines 11-35). The substituent group $(-O-$

C(R¹)(R³)-R²) is preferred to attach to the phthalocyanine compound to improve recording sensitivity, adjust absorption wavelength of the recording layer and improve solubility in the coating solvent (col. 7, lines 11-14). Therefore, it would have been obvious to substitute the phthalocyanine dye of Yashiro in the composition of Tronche to improve coating properties as taught by Yashiro.

Response to Arguments

5. Applicant's arguments filed 4/2/2010 have been fully considered but they are not persuasive.
6. Applicant argues that Tronche does not teach alkali-soluble polymers. Further, that Tronche teaches multifunctional methacrylate components with preferred components as novolak polyester oligomers and epoxy novolak acrylates.

Claim 1 recites, "b) as a component (B) an alkali soluble reactive or unreactive oligomer or reactive or unreactive polymer." Tronche teaches oligomers, such as tri- or tetra functional (meth)acrylated polyester oligomers and they are alkali-soluble (page 5, [0045]).

7. Applicant argues that Tronche is directed to an optical disc and makes no statements as to preferred color of the dye of interest. Further, Tronche does not teach that the dye used in the optical disc coatings should be halogen free.

Tronche is relied upon for the teaching of a radiation-curable composition comprising a photoinitiator, polymerizable monomer, epoxy acrylate, an alkali-soluble polymer and a phthalocyanine dye. However, Yashiro is relied upon for the specific phthalocyanine dye as claimed. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references

individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Although Tronche may not teach a green colorant over other phthalocyanine dyes, Yashiro teaches an optical disc comprising a phthalocyanine dye. The phthalocuanine dye in example 1 in column 10 of Yashiro shows $\text{--O--C(R}_1\text{)(R}_3\text{)--R}_2$ is the preferred group attached to each of the benzene rings, wherein the other atom of each pair is a hydrogen atom. So, wherein A7 is the group $\text{--O--C(R}_1\text{)(R}_3\text{)--R}_2$, A8 may be a hydrogen atom. The resultant formula is representative of the structure in present claims 1 and 2. The phthalocyanine dye as shown in Yashiro does not have to include a halogen atom.

8. Applicant argues that although Yashiro teaches the copper phthalocyanine as claimed, one of ordinary skill in the art would have to choose all four pairs to have the group $\text{--O--C(R}_1\text{)(R}_3\text{)--R}_2$ wherein (R₂) is an unsubstituted aryl and R₁ and R₃ are either hydrogen or alkyl. Further, that although there is some overlap, there is no direct motivation to make a green colorant with the structure as claimed, that is also halogen free.

The phthalocyanine dye in example 1 in column 10 of Yashiro shows $\text{--O--C(R}_1\text{)(R}_3\text{)--R}_2$ is the preferred group attached to each of the benzene rings, wherein the other atom of each pair is a hydrogen atom. So, wherein A7 is the group $\text{--O--C(R}_1\text{)(R}_3\text{)--R}_2$, A8 may be a hydrogen atom. The resultant formula is representative of the structure in present claims 1 and 2 and would be expected to have a green color. The phthalocyanine dye as shown in Yashiro does not have to include a halogen atom. Further, the structure in present claim 1 has a broad base of substituent groups that

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form a phthalocyanine green colorant. Since Yashiro teaches the phthalocyanine colorant wherein the preferred substituent group is $-O-C(R_1)(R_3)-R_2$, one of ordinary skill would immediately envision forming the structure as claimed.

9. Applicant argues that while one skilled in the art might make a phthalocyanine dye substituted with alkoxy of 1-10 carbons, in order to meet the limitations of the claims, one skilled in the art would need to select all four pairs be the group $-O-C(R_1)(R_3)-R_2$ wherein (R_2) is an unsubstituted aryl and R_1 and R_3 are either hydrogen or alkyl. Further, one skilled in the art would need to do without halogen substitution and one would also have to select a green dye. Yashiro clearly directs one skilled in the art to halogen substitutions in examples 1 and 2 and gives no indication of color preference.

The phthalocyanine dye in example 1 in column 10 of Yashiro shows $-O-C(R_1)(R_3)-R_2$ is the preferred group attached to each of the benzene rings, wherein the other preferred atom of each pair is a hydrogen atom. The preferred substituents are shown in column 7, lines 18-22. So, wherein A_7 is the group $-O-C(R_1)(R_3)-R_2$, A_8 is a hydrogen atom. Although not exemplified in the examples, copper is a preferred metal in the phthalocyanine colorant (col. 6, line 17). The resultant formula is representative of the structure in present claims 1 and 2 and would be expected to have a green color. The phthalocyanine dye as shown in Yashiro does not have to include a halogen atom. Further, the structure in present claim 1 has a broad base of substituent groups that form a phthalocyanine green colorant. Since Yashiro teaches the phthalocyanine colorant wherein the preferred substituent groups are $-O-C(R_1)(R_3)-R_2$ and hydrogen

(col. 7, lines 18-22), one of ordinary skill would immediately envision forming the structure as claimed.

10. Applicant argues that the reference example (pigment 7) shows multiple chlorine substitution on the phthalocyanine, while the application examples on page 17 of the specification are halogen free and show no discoloration after heat treatment compared to the reference. Therefore, the use of phthalocyanines of formula (1) without halogens shows good heat stability.

Although applicant shows the adverse affect of a halogen in the phthalocyanine colorant, the references teach that the preferred groups attached to the phthalocyanine are halogen-free.

11. Applicant argues that Yashira does not understand the importance of including a green phthalocyanine of formula (1) in a photosensitive composition.

In response to applicant's argument that Yashira does not understand the importance of including a green phthalocyanine of formula (1) in a photosensitive composition, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). Although Yashiro may not teach the same advantages of a green colorant, Yashiro teaches a phthalocyanine colorant with preferred substituent groups of $-O-C(R_1)(R_3)-R_2$ and hydrogen atoms, as in the present claims 1 and 2. Therefore, the resultant structure would be expected to have the structure as in present claim 2 and have an inherent green color, absent any evidence to the contrary.

12. Applicant argues that Yashiro's application is not especially sensitive to the actual color of the dye used in high speed recording. Further, applicant argues that simply because a compound absorbs at 780nm does not mean it will be a specific color because the remainder of the absorption within the pigment will determine the actual color.

Yashiro teaches a phthalocyanine dye with copper as the preferred metal and the preferred substituent groups are $-O-C(R_1)(R_3)-R_2$ and hydrogen atoms on each benzene ring. The resultant dye is representative of the structure in present claim 2. Since the compound in present claim 2 is a green colorant, it would be expected that a phthalocyanine dye in Yashiro which has the same formula as in present claim 2 would also be a green colorant, because the green color of the phthalocyanine dye is an inherent property based on the structure.

13. Applicant argues that Yashiro teaches "other groups" may be added to the substituent groups A1-A8. However, the groups are too numerous to choose from.

Yashiro specifically teaches $-O-C(R_1)(R_3)-R_2$ and hydrogen atoms as the preferred combination of groups for the phthalocyanine dye. Therefore, one of ordinary skill would immediately envision forming the structure of present claim 2, based on the teachings of Yashiro.

Claims 3 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CONNIE P. JOHNSON whose telephone number is (571)272-7758. The examiner can normally be reached on 7:30am-4:00pm Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Connie P. Johnson/
Examiner, Art Unit 1795

/Cynthia H Kelly/
Supervisory Patent Examiner, Art Unit 1795